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| 09/416,414  | 10/12/1999  | INDERPAL S. BHANDARI | VG-001                    | 6138             |
| 24972   | 7590        | 07/12/2004           |                           |                  |
| FULBRIGHT & JAWORSKI, LLP<br>666 FIFTH AVE<br>NEW YORK, NY 10103-3198 |             |                      | EXAMINER<br>COLBERT, ELLA |                  |
|   |             |                      | ART UNIT<br>3624          | PAPER NUMBER     |
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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

### Application No.

09/416,414

### Applicant(s)

BHANDARI ET AL. E

### Examiner

Ella Colbert

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 29-96 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29-96 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. Claims 29-96 are pending. Claims 29, 32, 33, 35, 36, 38, 50, 54, and 57-93 have been amended in this communication filed 03/31/04 entered as Response After Non-Final with an Extension of Time and Affidavit(s) under 37 C.F.R. 131.
2. The amendment to Claims 32 and 60 has been overcome and the 35 U.S.C. 112, second paragraph rejection is hereby withdrawn. The amendment to claims 57, 63, 68, 70, 75, 76, 93, 94, and 96 has overcome the 35 U.S.C. 112, second paragraph rejection and is hereby withdrawn. The 35 U.S.C. 112, second paragraph rejection for claims 33, 35, 36, 38, 47, 48, 63, 64, and 66 still remains as addressed here below.
3. The claim objection for claims 31, 35, 62, and 66 has been overcome by Applicants' amendment to claims 31, 35, 62, and 66 and is hereby withdrawn.

### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 33, 35, 36, 38, 47, 48, 63, and 66 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 33, 35, 36, 38, 47, 48, 63, 64, and 66 are conditional statements. It is not understood in claim 33 what step or step would be performed "if it is determined that more than one query in the set of related queries has the greatest-valued result." Do Applicants' mean a list of

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queries would be generated ..."? Claims 35, 36, 38, 47, 48, 63, 64, and 66 have a similar issue.

Claim 30 recites the limitation "user process input" in line 4 and "user input" in lines 5 and 6. There is insufficient antecedent basis for this limitation in the claim.

This limitation would be better recited as "user input process."

Claim 67 is rejected for the following: Claim 67 recites "... said computing device for determining to determine queries ...". This claim limitation appears to be redundant making the claim language unclear.

Claims 58, 63, 66, 67, 76, 94, and 96 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 58 recites the limitation "... a user or user process input, to select one or more attributes from a plurality of attributes in response to the user input, ....". This claim limitation is very vague and unclear. Do Applicants' mean a user or user input process for selecting one or more attributes from a plurality of attributes ..."? Claim 63 is very vague, confusing, and unclear as written. Claims 66, 67, 76, and 94 have a similar problem with vague, confusing, and unclear limitations. Claim 66 recites "... for adding the query in said of related queries ...". Something appears to be missing after "in said" and before "of related queries". Claim 96 appears to have a similar problem with something missing after "plurality" and before "user queries".

### ***Claim Objections***

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6. Claims 38, 50, 51, 54, 57, 59, 77, and 93 are objected to because of the following informalities: Claim 38 (f), page 5, line 1 recites "... minimum result to end of said".

This would be better recited "... minimum result to the end of said".

Claim 50 recites "... consisting of attribute-valued string... a set of computationally related queries; and ... receiving at the computer ... assigned by a user or user process; ...". This would be better recited "... consisting of an attribute-valued string ... a set of computationally related queries; ... receiving at the computer ... assigned by a user or a user process; ...". Claim 51 recites "... computation defines relationship ...". This would be better recited "... computations defines a relationship ...". Claim 54, line 1 recites "...finding queries having ...". This would be better recited "... finding queries having the ..." or "... finding queries having a ...". Claim 57 has a similar problem. Claim 59, line 2 recites "... computation defines relationship ...". This would be better recited "... computation defines the relationship ...". Claim 77 recites "in said plurality of computation ...". This limitation would be better recited "in said plurality of computations ...". Claim 93, page 16 has a similar problem in line 7. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 29-96 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US 4,490,811) Yianilos et al, hereafter Yianilos in view of Adar et al, hereafter Adar.

With respect to claim 29, Yianilos teaches, receiving at the computer a user query consisting of at least one computation and an attribute-value list having one or more elements, each element being associated with an attribute having a value assigned by a user or a user process (col. 5, lines 21-34 and lines 40-68, col. 4, lines 1-2, and col. 7, lines 66-68); determining queries in a plurality of queries having the at least one computation and sharing one or more elements in common with the user

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query to provide a set of related queries (col. 4, lines 22-28 and lines 51-67 and col. 5, lines 1-10); and computing a result of the at least one computation for the attribute-value list associated with each query in the set of related queries (col. 5, lines 28-57).

Yianilos failed to teach, comparing the results associated with the set of related queries to determine one or more queries having the greatest-valued result, or one or more queries having the least-valued result.

Adar teaches, comparing the results associated with the set of related queries to determine one or more queries (col. 2, lines 47-65 and col. 9, lines 7-17). It would have been obvious to one having ordinary skill in the art at the time the invention was made to compare the results associated with the set of related queries to determine one or more queries having the greatest-valued result, or one or more queries having the least-valued result and to modify in Yianilos because such a modification would allow Yianilos to make a comparison and to perform a computation to arrive at either a greatest-value or a least value attribute.

With respect to claims 30 and 58, Yianilos teaches, selecting the at least one computation from a plurality of computations in response to a user or user process input (col. 14, lines 17-41); selecting one or more attributes from a plurality of attributes in response to the user input (col. 14, lines 46-60); and selecting a value for each attribute selected in response to the user input to form an element (col. 14, lines 60-68 and col. 15, lines 1-3).

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With respect to claims 31 and 59, Yianilos teaches, wherein the at least one computation defines a relationship between the plurality of queries and a plurality of results (col. 15, lines 8-62).

With respect to claims 32 and 60, Yianilos teaches, wherein the results associated with the related queries are numeric results (col. Col.17, lines 32-46).

With respect to claims 33 and 61, Yianilos teaches, comprising the step of selecting one query as the query having the a maximum result if it is determined that more than one query in the set of related queries has the greatest-valued result (col. 19, lines 36-68 and col. 20, lines 1-22).

With respect to claims 34 and 62, Yianilos teaches, the step of generating a list of queries having the at least one computation, each query being associated with an attribute-value list having the greatest-valued result of all queries in the plurality sharing one or more elements in common with a preceding query or succeeding query in the list of queries (col. 24, lines 54-66 and col. 25, lines 1-29).

With respect to claims 35, 37, & 63, Yianilos teaches, the list of queries yields a non-decreasing succession of numeric results and wherein the step of generating a list comprises the steps of: (a) adding the query in the set of related queries having the greatest-valued result as a last query in the list of queries (col. 27, lines 17-63 and col. 28, lines 1-5); and (b) determining queries in said plurality of queries having said at least one computation and sharing one or more elements in common with said last query to provide a set of queries related to said last query (col. 27, lines 31-40);(c) computing a result of said at least one computation for the attribute-valued string associated with



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each query in said set of queries related to said last query (col. 24, lines 5-37); (d) comparing the results associated with said set of queries related to said last query to determine one or more queries having the greatest-valued result (col. 27, lines 4-63 and com. 28, lines 1-33); (e) selecting one query as the query having a maximum result if it is determined that more than one query in said set of queries related to said last query has the greatest-valued result (col. 31, lines 65-68 and col. 32, lines 1-36); (f) adding the query having the greatest-valued result if to the end of said list of queries as a new last query if it is determined that said new last query is not equivalent to said last query (col. 29, lines 1-37); and (g) repeating steps (b) through (f) until there is no query in the plurality of queries having a result greater than the last query and sharing one or more elements in common with the last query (col. 27, lines 17-63, col. 28, lines 1-5 and col. 29, lines 1-37).

With respect to claim 37, Yianilos teaches, the step of generating a list of queries having said at least one computation, each query being associated with an attribute-valued string having the least-valued result of all queries in said plurality of queries sharing one or more elements in common with a preceding query or a succeeding query in said list of queries (col. 3, lines 12-34).

These claims dependent are also rejected for the similar rationale given for claims 29 & 33.

With respect to claims 36 and 64, Yianilos teaches, comprising the step of selecting one query as the query having the least-valued result if it is determined that

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more than one query in the set of related queries has the least valued result (col. 3, lines 40-68 and col. 4, lines 1-16).

These dependent claims are also rejected for the similar rationale as given above for claim 33.

With respect to claims 37 and 65, these dependent claims are rejected for the similar rationale as given above for claim 35.

With respect to claims 38, 54, 66, 93, & 96, these claims are rejected for the similar rationale given for claim 35.

With respect to claims 39, 55, 67, and 94, these claims are rejected for the similar rationale as given above for claims 29 and 35.

With respect to claims 40, 56, 68, and 95, Yianilos teaches, wherein the step (d) further comprises the steps of determining whether the first query has the greatest-valued result or the least-valued result (col. 5, lines 1-18). A query is known in the art for specifying the characteristics (criteria) used to guide the computer to the required information.

With respect to claims 41 and 69, Yianilos teaches, the step of generating pre-computed greatest-valued and pre-computed least-valued lists by pre-determining for each query in the plurality of queries whether each query has a greatest-valued result or a least-valued result for all queries in the plurality of queries having at least one computation and sharing one or more elements in common with each query (col. 19, lines 24-67 and col. 20, lines 1-22).

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With respect to claims 42, 70, & 75, Yianilos teaches, determining whether any query in the set of related queries is in the pre-computed greatest-valued list to provide a set of max queries (col. 5, lines 1-26) and determining whether any query in the set of related queries is in the pre-computed least-valued list to provide a set of min queries (col. 5, lines 29-46).

With respect to claims 43 and 71, Yianilos teaches, the step of displaying the user query and the result of the user query along with the greatest-valued result and one or more queries having the greatest-valued result (col. 19, lines 29-68 and col. 20, lines 1-22 (display) "appear").

With respect to claims 44 and 72, Yianilos teaches, the step of displaying further displays the least-valued result and one or more queries having the least-valued result (col. 23, lines 24-50 (display) "observe."

With respect to claims 45 and 73, Yianilos teaches, the step of displaying the user query and the result of the user query along with each query and the corresponding greatest-valued result in the list (col. 2, lines 31-38 and col. 27, lines 32-55).

With respect to claims 46 and 74, these dependent claims are rejected for the similar rationale given for claims 44 and 45.

With respect to claim 47, this dependent claim is rejected for the similar rationale given for claims 43 and 45.

With respect to claim 48, this dependent claim is rejected for the similar rationale given for claims 35, 38, & 39.

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With respect to claim 49, this dependent claim is rejected for the similar rationale given for claims 35-37.

With respect to claims 50 and 76, these independent claims are rejected for the similar rationale given for claims 29 and 38.

With respect to claims 51 and 77, these dependent claims are rejected for the similar rationale given for claim 31.

With respect to claims 52 and 78, these dependent claims are rejected for the similar rationale given for claims 42, 43, & 45.

With respect to claims 53 and 79, these dependent claims are rejected for the similar rationale given for claims 42 & 44.

With respect to claims 54, 93, and 96, these independent claims are rejected for the similar rationale given for claims 29, 35, and 39.

With respect to claim 57, Yianilos teaches, a device for receiving a user query, a device for determining, a computing device, and a comparator for comparing (col. 2, lines 18-65). This independent claim is rejected for the similar rationale given above for claim 29.

With respect to claim 79, Yianilos failed to teach, the step of displaying displays each query and the corresponding least-valued result in the set of min queries.

Adar teaches, the step of displaying displays each query and the corresponding least-valued result in the set of min queries (col. 3, lines 51-60). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a step or displaying displays for each query and the corresponding least-valued

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result in the set of min queries and to modify in Yianilos because such a modification would allow Yianilos to compute a rank value for each of the documents in the set of queries, the number of queries and the lowest rank value to arrive at a result.

With respect to claims 80, 81, 82, 84, & 86-92, Yianilos failed to teach, a computing device operable to compute results for sports data, call center data, customer relationship management data, multimedia data, tennis data, soccer data, golf data, football data, baseball data, and cricket data. Adar teaches, a computing device operable to compute results for sports data, call center data, customer relationship management data, multimedia data, tennis data, soccer data, golf data, football data, baseball data, and cricket data (col. 4, lines 58-65 and col. 9, lines 7-17). Sports data, call center data, customer relationship management data, multimedia data, tennis data, soccer data, golf data, football data, baseball data, and cricket data are merely attributes to obtain a result of a computation.

With respect to claim 83, Yianilos failed to teach, the computing device is operable to compute results for banking data. Adar teaches, the computing device is operable to compute results for banking data (col. 1, lines 26-30). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a computing device operable to compute results for banking data and to modify in Yianilos because such a modification would allow Yianilos to retrieve large amounts of computed information from databases.

With respect to claim 85, Yianilos failed to teach, the computing device is operable to compute results for textual data. Adar teaches, the computing device is

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operable to compute results for textual data (col. 5, lines 2-17). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a computing device operable to compute results for textual data and to modify in Yianilos because such a modification would allow Yianilos to provide text to a text string processor from a preexisting source with the text string processor receiving the input text string.

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 29-96 have been considered but are moot in view of the new ground(s) of rejection.


### ***Inquiries***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ella Colbert whose telephone number is 703-308-7064. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on 703-308-1038. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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E. Colbert  
July 6, 2004